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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/454,969	12/06/1999	RYOJI FUKUDA	35.C14082	4477

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EXAMINER

ABDULSELAM, ABBAS L

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 12/03/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/454,969

Applicant(s)
RYOJI FUKUDA

Examiner
Abbas Abdulsalam

Group Art Unit
2674



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-61 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-61 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 10

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2674

DETAILED ACTION

1. Certified copies of foreign documents have been received.

Claim Rejections 35 U.S.C. 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

- 2 Claim are 1-61 rejected under 35 U.S.C. 102(e) as being anticipated by Babb et al.
(USPN 5940065).

Regarding claims 1, 15, 22, 35, 42 and 55, Babb teaches correcting of coordinates such as (X, Y), and correction coefficients. See column 2, lines 1-9. Boob teaches uncorrected coordinates input to be linearized by algorithm means before it is ready for lookup table which operates in linearized space. See column 2, lines 11-14. Babb further teaches that the lookup table provides an addressable storage for correction coefficients which are used to calculate a location from measured detector values. See column 2, lines 1-2. Babb teaches that the coefficients are to be solved using simultaneous equations and those coefficients are to be determined by using the least mean square curve. See column 4, lines 23-25 and column 11, lines 24-29. Babb teaches the range of corrections as being from zero order to polynomial levels and also teaches a mapping function to map the detector outputs to corrected coordinate positions. See column 2, lines 9-10 and column 4, lines 19-23. Furthermore, Babb teaches a method for determining coordinate positions with respect to a second medium having a surface from multiple input values. See column 8, lines 49-67. Babb teaches a programmable read only memory (EEPROM) which may

Art Unit: 2674

be attached or included with a sensor for string coefficients. See column 10, line 66 and column 11, lines 1-5. Likewise, Babb teaches 2K bit memory device that is used to store the calculated and applied coefficients. See column 16, lines 50-53.

Regarding claim 2, Babb teaches that for each set of coordinate values (X, Y), the detector values are used as variables A, B, C, D in the form of equations. See column 13, lines 20-32.

Regarding claims 3, 24 and 44, Babb teaches about the input values sensed by condition detectors, and mapping equation relating the input value with a coordinate position. See column 10, lines 36-44, and column 11, lines 13-16.

Regarding claims 4, 16, 25, 36, 45 and 56, Babb teaches that the mapping equation which is capable of producing accurate position output. See column 3, lines 1-2, and column 4, lines 1-12.

Regarding claims 5-6, 26-27, 46-47 and 57, Babb teaches the calculation of 16 coefficients which are applied with 16 bit precision, and will fit in a 2Kbit memory device. See column 16, lines 48-53. Babb also teaches that there is a relationship between physical location of a touch and some coordinate schema. See column 1, lines 17-22. Furthermore, Babb teaches a mathematical relationship between measured data and physical location as it applies to coordinate transformation. See column 1, lines 59-67.

Regarding claims 8, 29 and 49, Babb teaches solving simultaneous equations which determines coefficients. See column 11, lines 24-29

Art Unit: 2674

Regarding claims 10, 20, 31, 40, 51 and 60, Babb teaches mapping for a set of sensor data coordinates to touch coordinates and also teaches that the mapping relation has inputs greater in number than outputs. See column 4, lines 39-47. Babb teaches distortions of coordinate values in X and Y and in rectangular shape. See Fig 1.

Regarding claims 11, 21, 23, 32, 41, 43, 52 and 61, Babb teaches a method of determining coefficients involving solving of polynomial equations. See column 7, lines 25-48. Babb also teaches correction coefficients as well as storage for correction coefficients, and the steps of producing corrected coordinates. See column 2, lines 1-18.

Regarding claims 12, 33 and 53, Babb teaches excitation which is applied to the bus bars (4) and then switched to a second set of bus bars to define the second coordinates. See column 2, lines 39-49, and Fig 2.

Regarding claims 13, 34 and 54, Babb teaches algorithmically compensated pressure and position sensor. See Fig 11.

Regarding claim 14, Babb teaches a mapping system which can be provided as software driver system in a connected host computer. See column 11, lines 6-8

Regarding claims 17 and 37, Babb teaches a mapping relation information that may be stored in a memory device. See column 7, lines 9-11

Regarding claims 9, 30 and 50, see Fig 8 (257, 210).

Art Unit: 2674

Regarding claims 18, 38 and 58, Babb teaches ROM (226) which is used to store mapping algorithm from which output and position determinations are made. See column 18, lines 56-65 and Fig 11.

Regarding claims 7, 19, 28 39, 48 and 59, Babb teaches that coefficients are solved in such a way that errors are minimized in a given data set which is an array of output values for specific points with known locations. See column 7, lines 34-43.

Conclusion

3. The prior art made of record and not relied upon is considered to applicant's disclosure.

The following arts are cited for further reference.

U.S. Pat No. 4,650,926 to Nakamara

U.S. Pat No. 5,113,251 to Ichiyanagi

U.S. Pat No. 5,940,064 to Kai et al.

U.S. Pat No. 6,016,140 to Blouin et al.

U.S. Pat No. 6,229,529 to Yano et al.

Art Unit: 2674

4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to Crystal Park II, crystal drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**

Abbas Abdulsalam

Examiner

Art Unit 2674